CLAIMS:

1. A method of reducing, retarding or otherwise inhibiting the functional activity of HIV, which HIV has infected a mammalian host cell, said method comprising administering to said mammal an effective amount of an agent for a time and under conditions sufficient to down-regulate a membrane ion channel functional activity of said host cell.

2. The method according to claim 1 wherein said membrane ion chanel is a Vpu ion channel.

3. The method according to claim 3 wherein said HIV functional activity is HIV replication.

4. The method according to claim 3 wherein said host cell is a macrophage.

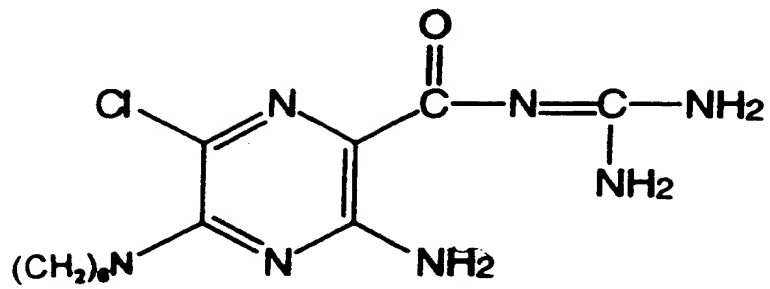
5. The method according to claim 3 wherein said host cell is a monocyte.

6. The method according to any one of claims 1 to 5 wherein said agent is an amiloride analogue or functional equivalent thereof.

7. The method according to claim 6 wherein said amiloride analogue comprises a substitution of the amino group at the 5- position of the pyrazine ring of functional equivalent thereof.

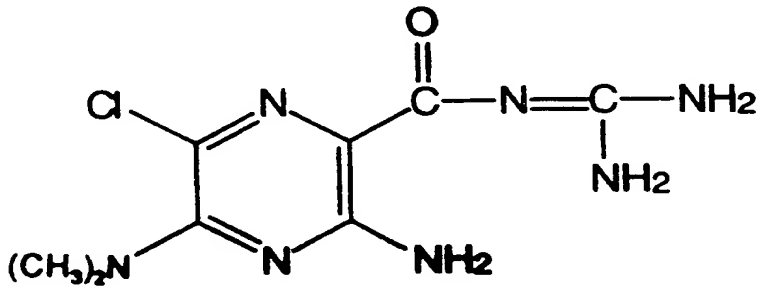
8. The method according to claim 7 wherein said amiloride analogue is HMA or functional equivalent thereof.

9. The method according to claim 8 wherein said HMA comprise the structure:



10. The method according to claim 7 wherein said amiloride analogue is DMA or functional equivalent thereof.

11. The method according to claim 10 wherein said DMA comprises the structure:



12. A method for the treatment and/or prophylaxis of HIV infection or AIDS in a mammal said method comprising administering to said mammal an effective amount of an agent for a time and under conditions sufficient to down-regulate the Vpu ion channel functional activity of an HIV infected mammalian host cell, wherein said Vpu functional actvity reduces, retards or otherwise inhibits the functional activity of said HIV.

13. The method according to claim 12 wherein said HIV functional activity is HIV replication.

14. The method according to claim 13 wherein said host cell is a macrophage.

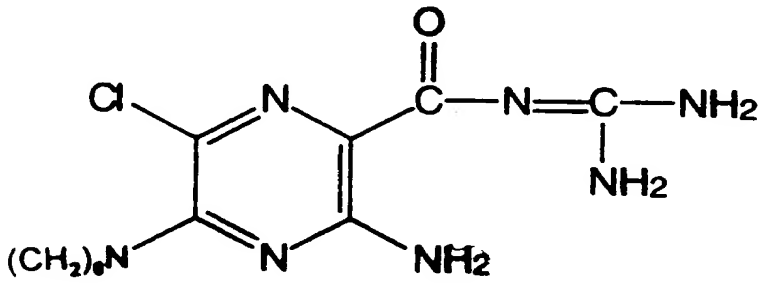
15. The method according to claim 14 wherein said host cell is a monocyte.

16. The method according to any one of claims 12 to 15 wherein said agent is an amiloride analogue or functional equivalent thereof.

17. The method according to claim 16 wherein said amiloride analogue comprises a substitution of the amino group at the 5- position of the pyrazine ring of functional equivalent thereof.

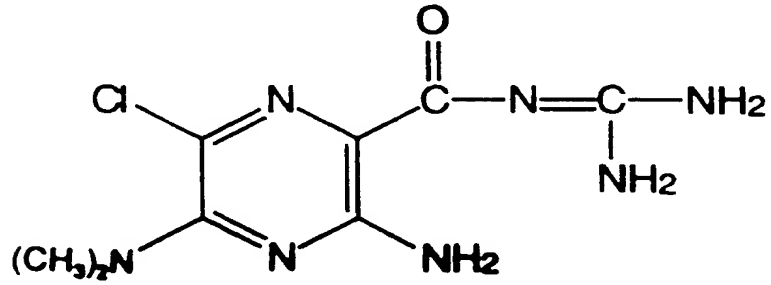
18. The method according to claim 17 wherein said amiloride analogue is HMA or functional equivalent thereof.

19. The method according to claim 18 wherein said HMA comprise the structure:



20. The method according to claim 17 wherein said amiloride analogue is DMA or functional equivalent thereof.

21. The method according to claim 20 wherein said DMA comprises the structure:



22. Use of an agent in the manufacture of a medicament for the therapeutic and/or prophylactic treatment of HIV infection and/or AIDS in a mammal which agent reduces, retards or otherwise inhibits the Vpu ion channel functional actvity of an HIV infected cell.

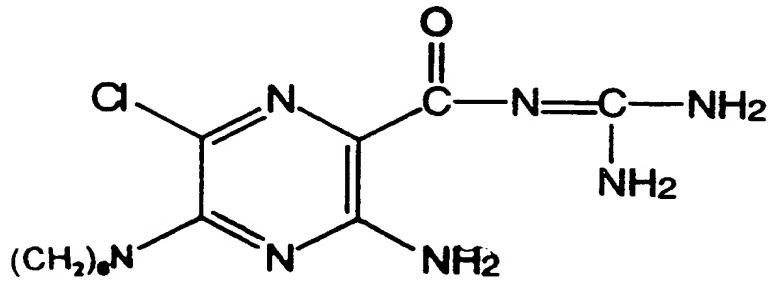
23. Use according to claim 22 wherein said functional activity is the mediation of HIV replication.

24. Use according to claim 22 or 23 wherein said agent is an amiloride analogue or functional equivalent thereof.

25. Use according to claim 24 wherein said amiloride analogue comprises a substitution of the amino group at the 5- position of the pyrazine ring or functional equivalent thereof.

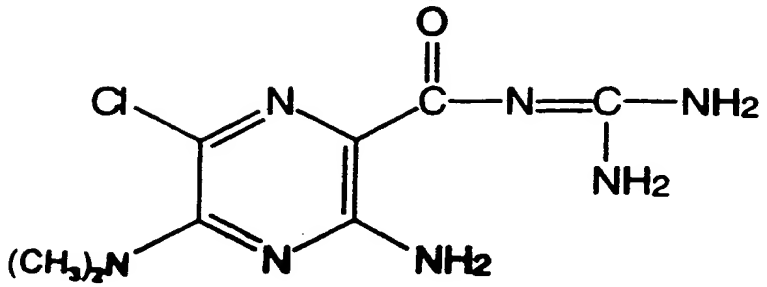
26. Use according to claim 25 wherein said amiloride analogue is HMA or functional equivalent thereof.

27. Use according to claim 26 wherein said HMA comprises the structure:



28. Use according to claim 25 wherein said amiloride analogue is DMA or functional equivalent thereof.

29. Use according to claim 28 wherein said DMA comprises the structure:



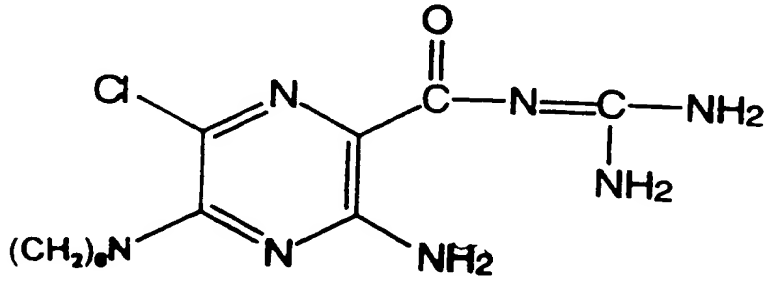
30. A method of reducing, retarding or otherwise inhibiting Vpu ion channel functional activity in a subject said method comprising administering to said subject an effective amount of an amiloride analogue or functional equivalent thereof for a time and under conditions sufficient to inhibit Vpu ion channel functional activity.

31. The method according to claim 30 wherein said Vpu ion channel functional activity is Vpu ion channel mediation of HIV replication.

32. The method according to any one of claims 30 or 31 wherein said amiloride analogue comprises a substitution of the amino group of the 5- position of the pyrazine ring or functional equivalent thereof.

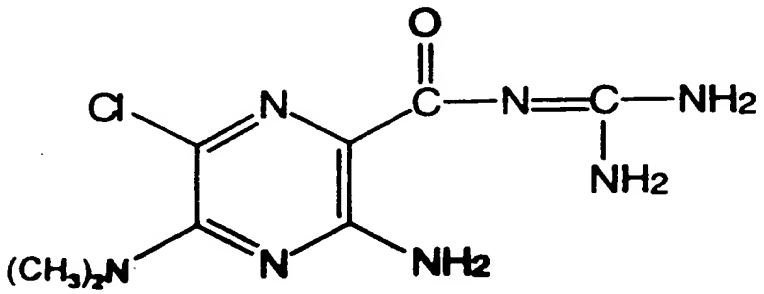
33. The method according to claim 32 wherein said amiloride analogue is HMA or functional equivalent thereof.

34. The method according to claim 33 wherein said HMA comprises the structure:



35. The method according to claim 32 wherein said amiloride analogue is DMA or functional equivalent thereof.

36. The method according to claim 35 wherein said DMA comprises the structure:



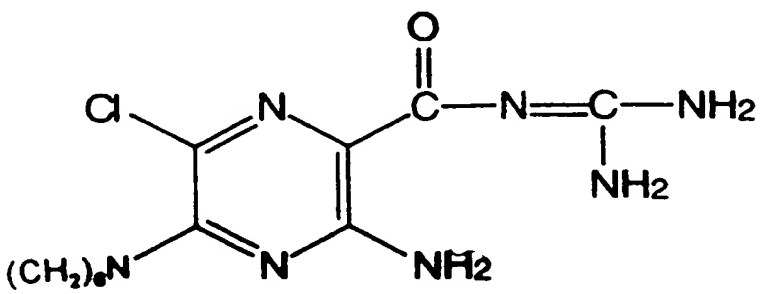
37. Agent for use in reducing, retarding or otherwise inhibiting Vpu ion channel functional activity.

38. The agent according to claim 37 wherein said Vpu ion channel functional activity is mediation of HIV replication.

39. The agent according to claim 38 wherein said agent is an amiloride analogue or functional equivalent thereof.

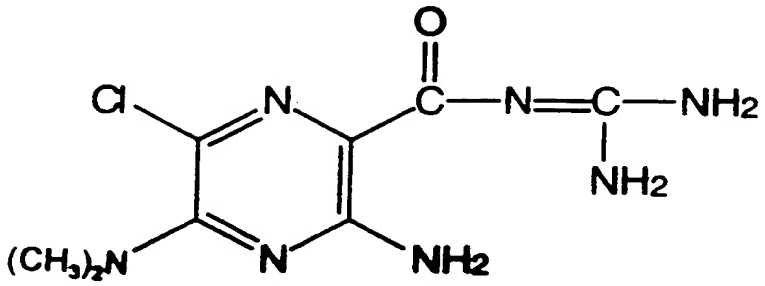
40. The agent according to claim 39 wherein said amiloride agent is HMA or functional equivalent thereof.

41. The agent according to claim 40 wherein said HMA comprises the structure:



42. The agent according to claim 39 wherein said amiloride agent is DMA or functional equivalent thereof.

43. The agent according to claim 42 wherein said DMA comprises the structure:

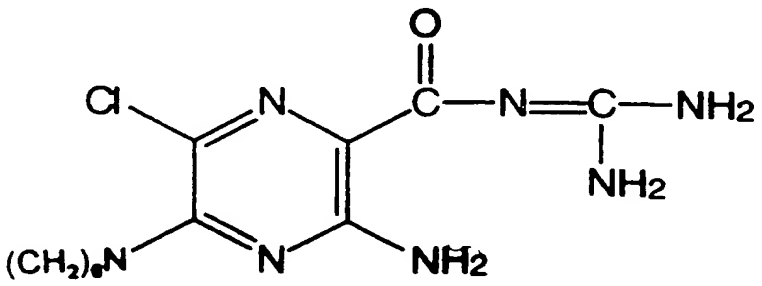


44. A pharmaceutical composition for use in reducing, retarding or otherwise inhibiting Vpu ion channel functional activity said composition comprising an agent as defined in accordance with any one of claims 1 to 21 and one or more pharmaceutical acceptable carriers and/or diluents.

45. The pharmaceutical composition according to claim 44 wherein said agent is an amiloride analogue or functional equivalent thereof.

46. The pharmaceutical composition according to claim 45 wherein said amiloride analogue is HMA or functional equivalent thereof.

47. The pharmaceutical composition according to claim 46 wherein said HMA comprises the structure:



48. The pharmaceutical composition according to claim 44 wherein said said amiloride analogue is DMA or functional equivalent thereof.

49. The pharmaceutical composition according to claim 48 wherein said DMA comprises the structure: